<u>Amendments to the Claims:</u> This listing of claims will replace all prior versions, and listings, of claims in the application

## **Listing of Claims:**

- 1. (Original) A method for preparing a 6-oxo-14-hydroxy- $\Delta^7$ -morphinane comprising oxidising a 6-methoxy-N-methyl- $\Delta^6$ ,  $\Delta^8$ -morphinane for a time and under conditions sufficient to form a 6-oxo-14-hydroxy-N-methyl- $\Delta^7$ -morphinane-N-oxide and converting the formed N-oxide to the 6-oxo-14-hydroxy- $\Delta^7$ -morphinane.
- 2. (Original) A method according to claim 1 wherein the oxidation is carried out by treating the 6-methoxy-N-methyl- $\Delta^6$ , $\Delta^8$ -morphinane with hydrogen peroxide in the presence of a carboxylic acid.
- 3. (Original) A method according to claim 2 wherein the carboxylic acid is formic acid or acetic acid.
- 4. (Original) A method according to claim 3 wherein the carboxylic acid is formic acid.
- 5. (Original) A method according to claim 4 wherein the concentration of formic acid is 45% by weight formic acid in water.
- 6. (Currently Amended) A method according to any one of claims 2 to 5 claim 2 wherein the 6-methoxy-N-methyl- $\Delta^6$ ,  $\Delta^8$ -morphinane is treated with a molar excess of hydrogen peroxide at a concentration of 50% by weight in water.
- 7. (Currently Amended) A method according to any one of claims 2 to 6 claim 2wherein the 6-methoxy-N-methyl- $\Delta^6$ , $\Delta^8$ -morphinane is dissolved in a mixture of the carboxylic acid and a solvent prior to the addition of the hydrogen peroxide.
- 8. (Original) A method according to claim 7 wherein the solvent is ethanol.
- 9. A method according to any one of claims 1 to 8 claim 1 wherein the oxidation is conducted at a temperature below 50°C.
- 10. (Original) A method according to claim 9 wherein the temperature is about 20°C.

- 11. (Currently Amended) A method according to any one of claims 1 to 10 including the additional claim 1 further comprising the step of isolating the 6-oxo-14-hydroxy-N-methyl- $\Delta^7$ -morphinane-N-oxide before the conversion to 6-oxo-14-hydroxy- $\Delta^7$ -morphinane.
- 12. (Original) A method according to claim 11 wherein the isolation step comprises neutralising the oxidation reaction mixture to a pH of about 7 by adding a base and collecting the N-oxide as a solid.
- 13. (Original) A method according to claim 12 wherein the base is selected from sodium or potassium hydroxide or potassium carbonate.
- 14. (Original) A method according to claim 13 wherein the base is sodium hydroxide.
- 15. (Original) A method according to claim 14 wherein sodium hydroxide is added to the oxidation reaction mixture at a rate which ensures that the reaction temperature reaches 55°C.
- 16. (Currently Amended) A method according to any one of claims 1 to 15 claim 1 wherein the formed N-oxide is converted to the 6-oxo-14-hydroxy- $\Delta^7$ -morphine by treating the N-oxide with a reducing agent.
- 17. (Original) A method for converting a 6-oxo-14-hydroxy-N-methyl- $\Delta^7$ -morphinane-N-oxide to a 6-oxo-14-hydroxy- $\Delta^7$ -morphinane comprising subjecting the N-oxide to reducing conditions to ring close the N-methyl group with the 14-hydroxy group forming an oxazolidine ring, and hydrolysing the ring closed oxazolidine product to form the 6-oxo-14-hydroxy- $\Delta^7$ -morphinane.
- 18. (Original) A method according to claim 17 wherein the reducing conditions comprise treating the 6-oxo-14-hydroxy-N-methyl- $\Delta^7$ -morphinane-N-oxide with a Fe(II) based reducing agent and formic acid.
- 19. (Original) A method according to claim 17 wherein the hydrolysing step is performed using a strong acid selected from hydrochloric acid, sulphuric acid, hydrobromic acid or phosphoric acid.
- 20. (Original) A method according to claim 19 wherein the strong acid is hydrochloric acid.

21. (Original) A method of preparing a morphinane compound having a modified morphinane skeleton of structure (B)

said method comprising treating a 6-oxo-N-methyl-14-hydroxy- $\Delta^7$ -morphinane-N-oxide with an Fe(II) reducing agent for a time and under conditions sufficient to ring close the N-methyl group with the 14-hydroxy group.

- 22. (Original) A method according to claim 19 wherein the 6-oxo-14-hydroxy-N-methyl- $\Delta^7$ -morphinane-N-oxide is treated as a slurry in methanol with a Fe(II) based reducing agent, whereby formic acid is added.
- 23. (Currently Amended) A method according to claim 21-or-22 wherein the Fe(II) reducing agent is FeSO<sub>4</sub>.
- 24. (Original) A method for preparing N-alkyl or N-alkenyl 6-oxo-14-hydroxy-morphinanes comprising:

oxidising a 6-methoxy-N-methyl- $\Delta^6$ , $\Delta^8$ -morphinane for a time and under conditions sufficient to form a 6-oxo-14-hydroxy-N-methyl- $\Delta^7$ -morphinane-N-oxide,

converting the formed N-oxide to a 6-oxo-14-hydroxy- $\Delta^7$ -morphinane,

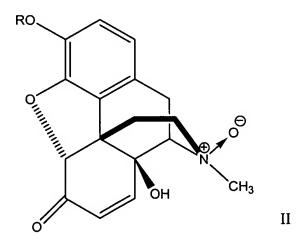
reducing the  $\Delta^{7}\mbox{ double}$  bond to form a 6-oxo-14-hydroxy morphinane, and

subjecting the 6-oxo-14-hydroxy-morphinane to N-alkylation to introduce the N-alkyl or N-alkenyl substituent.

25. (Currently Amended) A method according to any one of claims 1 to 16 and 24 claim 1 wherein the 6-methoxy-N-methyl- $\Delta^6$ ,  $\Delta^8$ -morphinane is a compound of formula I:

where R is H,  $C_1$ - $C_6$  alkyl, benzyl or acyl.

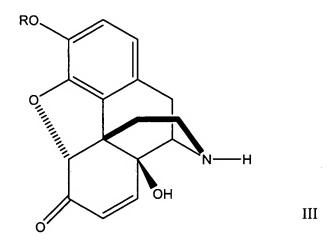
- 26. (Original) A method according to claim 25 wherein the 6-methoxy-N-methyl- $\Delta^6$ ,  $\Delta^8$ -morphinane is a compound of formula I where R is H or CH<sub>3</sub>.
- 27. (Original) A method according to claim 25 wherein wherein the 6-methoxy-N-methyl-  $\Delta^6$ ,  $\Delta^8$ -morphinane is a compound of formula I where R is H.
- 28. (Original) A method according to any one of claims 1 to 24 claim 1 wherein the 6-oxo-14-hydroxy-N-methyl- $\Delta^7$ -morphinane-N-oxide is compound of formula II:



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where R is independently selected from H,  $C_1$ - $C_6$ alkyl, benzyl or acyl.

- 29. (Original) A method according to claim 28 wherein the 6-oxo-14-hydroxy-N-methyl- $\Delta^7$ -morphinane N-oxide is compound of formula II where R is H or CH<sub>3</sub>.
- 30. (Original) A method according to claim 29 wherein the 6-oxo-14-hydroxy-N-methyl- $\Delta^7$ -morphinane N-oxide is a compound of formula II where R is H.
- 31. (Currently Amended) A method according to any one of claims 1 to 20 and 24 claim 1 wherein the 6-oxo-14-hydroxy- $\Delta^7$ -morphinane is a compound of formula III:



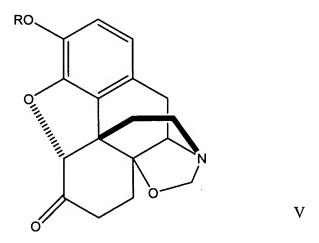
wherein R is H,  $C_1$ - $C_6$ alkyl, benzyl or acyl.

- 32. (Original) A method according to claim 31 wherein the 6-oxo-14-hydróxy- $\Delta^7$ -morphinane is a compound of formula III where R is H or CH<sub>3</sub>.
- 33. (Original) A method according to claim 32 wherein the 6-oxo-14-hydroxy- $\Delta^7$ -morphinane is a compound of formula III where R is H.
- 34. (Original) An oxazolidine of formula IV:

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where R is H,  $C_1$ - $C_6$ alkyl, benzyl or acyl.

- 35. An oxazolidine of formula IV according to claim 34 wherein R is H, CH<sub>3</sub> or benzyl.
- 36. An oxazolidine of formula IV according to claim 35 wherein R is H.
- 37. An oxazolidine of formula V:



where R is H,  $C_1$ - $C_6$ alkyl, benzyl or acyl.

- 38. An oxazolidine of formula V according to claim 37 wherein R is H or CH<sub>3</sub>.
- 39. An oxazolidine of formula V according to claim 38 wherein R is H.

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